Remarks

The Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

Claims 67-132 are pending. Claims 1-66 have been canceled without prejudice.

In the Office action, the Examiner rejects claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,933,451 to Ozkan et al. ("Ozkan") in view of U.S. Patent No. 6,459,811 to Hurst ("Hurst"). The Examiner rejects claims 117-120 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Hurst and U.S. Patent No. 5,541,852 to Eyuboglu et al. ("Eyuboglu"). Finally, the Examiner rejects claims 78, 98, 111 and 123 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Hurst and U.S. Patent No. 6,873,629 to Morris et al. ("Morris"). The Applicants respectfully disagree with the rejections.

I. Claim Amendments.

Independent claims 67, 92, 108, 117, 121, 128 and 132 have been amended by adding the word "clip" to the respective independent claims. The application as filed supports the amendments at, for example, pages 6, 13, 14, 23 and 24, and the amendments do not raise the issue of new matter. Various dependent claims have been amended for the sake of consistency with their respective parent independent claims.

The amendments follow an argument made in the previous Amendment (fourth argument in section II.A) and address the response of the Examiner in the final Office action (section entitled, "Response to Remarks" on page 2.) The amendments reinforce a point already searched and considered by the Examiner. The amendments do not "present *new issues* requiring further consideration or search" (MPEP 714.13, emphasis added), and they should be entered.

In any case, the amendments should be entered because they put the rejected claims in better form for consideration on appeal. Prosecution of the application has reached a mature stage, and the remaining issues have been refined such that entry of the amendments would facilitate prosecution.

II. Examiner's Position in the Final Office Action.

In the final Office action, the Examiner writes:

Furthermore, in contrast to Applicant's assertion that Ozkan's decoder parameters

> constitute a single set of reference decoder parameters for video in one channel, Ozkan discloses decoder parameters constituting multiple sets of reference decoder parameters for video in a plurality of channels.

(Final Office action, page 2, emphasis in original.) The Applicants respectfully disagree that Ozkan teaches or suggests "reference decoder parameters" or "decoder parameters." In any case, the Examiner seems to be taking the position that Ozkan discloses multiple sets of parameters for a plurality of channels, and that this qualifies as multiple sets of parameters for "given video." The Applicants have therefore amended the independent claims to clarify that the "multiple sets" of parameters in the claims are "for a given video clip." Having multiple sets of parameters for multiple channels (as in Ozkan) is different than, and leads away from, having multiple sets of parameters for "*a bit stream of encoded data for the given video clip*" (as in the claims).

III. Claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132 Should Be Allowable.

In the final Office action, the Examiner rejects claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Hurst. The Applicants respectfully disagree because Ozkan and Hurst, taken separately or in combination, fail to teach or suggest at least one element of each of claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132. Moreover, the Examiner's combination of Ozkan and Hurst is improper.

A. Ozkan and Hurst, Taken Separately or in Combination, Fail to Teach or Suggest at Least One Element of Each of Claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132.

Claim 67, as amended, recites:

> receiving multiple sets of reference decoder parameters signaled for a given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Claim 92, as amended, recites:

> receiving multiple sets of reference decoder parameters signaled for a given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Claim 108, as amended, recites:

receiving a number parameter that indicates how many sets of reference decoder parameters are signaled for a given video clip;
receiving multiple sets of reference decoder parameters signaled for the given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Claim 121, as amended, recites:

receiving a number parameter that indicates how many sets of reference decoder parameters are signaled for a given video clip;
receiving multiple sets of reference decoder parameters signaled for the given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Claim 128, as amended, recites:

one or more modules for receiving multiple sets of reference decoder parameters signaled for a given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Claim 132, as amended, recites:

receiving multiple sets of reference decoder parameters signaled for a given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Ozkan fails to teach or suggest the above-cited language of claims 67, 92, 108, 121, 128 and 132, respectively. Ozkan describes a minimum bit rate allocation R_{min} for a video channel, a maximum bit rate allocation R_{max} for the video channel and a decoder buffer size D for the video channel. (Ozkan, 10:27-67.) Ozkan also describes multiple channels, with each channel having its own set of R_{min}, R_{max} and D. Even if, for the sake of argument, R_{min}, R_{max} and D were considered to be reference decoder parameters (and the Applicants believe they are not), using multiple sets of parameters for multiple channels, with each channel having one set of parameters (as in Ozkan), leads away from

using multiple sets of parameters for "*a bit stream of encoded data for the given video clip*" (as in claim 67, 92, 108, 121, 128 or 132).

Hurst also fails to teach or suggest the above-cited language of claims 67, 92, 108, 121, 128 and 132, respectively. In Hurst, different encoders use different VBV models for different bitstreams. (Hurst, 4:17-29, 7:40-45.) Using different VBV models for different bitstreams, with each encoder having its own VBV for one bit stream (as in Hurst), is different than, and leads away from, using multiple sets of parameters for "*a bit stream of encoded data for the given video clip*" (as in claim 67, 92, 108, 121, 128 or 132).

Thus, taken separately, each of Ozkan and Hurst fails to teach or suggest the above-cited language of claims 67, 92, 108, 121, 128 and 132, respectively. The combination of Ozkan and Hurst fails to overcome this deficiency.

Claims 67, 92, 108, 121, 128 or 132 should be allowable. Each of dependent claims 68-77, 79-91, 93-97, 99-107, 109, 110, 112-116, 122, 124-127 and 129-131 depends directly or indirectly from, and includes the language of, claim 67, 92, 108, 121, 128 or 132, and should also be allowable. The Applicants will not belabor the merits of the separate patentability of these dependent claims.

B. The Combination of Ozkam and Hurst Made to Reject Claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132 Is Improper.

Previously, the Applicants pointed out that Ozkan fails to teach or suggest "reference decoder parameters" signaled for a "reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video." In the final Office action, the Examiner acknowledges, "Ozkan et al does not seem to particularly disclose receiving for a reference decoder model that specifies constraints on fluctuations of a bitstream of encoded video data." (Final Office action, page 3, emphasis in original.) The Examiner then cites Hurst as disclosing the above-cited language of the claims, however, and combines Ozkan and Hurst. This combination of Ozkan and Hurst is improper because it changes the principle of operation of Ozkan.

Ozkan describes making encoder-side decisions about rate control depending on the complexity of input video. (*See* Ozkan, Figure 1, 2:57-3:21, 3:48-62, 4:63-5:8, 5:53-6:29.) Ozkan emphasizes using existing constant bit rate ("CBR") encoders without modification of the signals output by the CBR encoders. (Ozkan, 1:3-6, 2:11-34.) "Apparatus according to the present inventions provides a

measure of the complexity of a data input signal which does not require complex circuitry in addition to the already present CBR encoder. Instead, the *required information signals*, the quantizing step size and the resulting bit rate, are *already present in the CBR encoder*." (Ozkan, 2:26-31, emphasis added.) The Examiner has combined Ozkan with Hurst such that the combination involves signaling of additional information -- "multiple sets of reference decoder parameters *signaled*" for a given video clip, as recited in claims 67, 92, 108, 121, 128 and 132, respectively. Signaling additional information changes the principle of operation of Ozkan, and thus the Examiner's combination is improper. (MPEP 2143.01.VI, "THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE.")

For at least this additional reasons, claims 67-77, 79-97, 99-110, 112-116, 121, 122 and 124-132 should be allowable.

IV. Claims 117-120 Should Be Allowable.

In the final Office action, the Examiner rejects claims 117-120 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Hurst and Eyuboglu. The Applicants respectfully disagree.

Claim 117, as amended, recites:

> receiving multiple sets of reference decoder parameters signaled for a given video clip, wherein each of the multiple sets comprises a rate parameter and a decoder buffer size parameter for a reference decoder model that specifies constraints on fluctuations of a bit stream of encoded data for the given video clip.

Ozkan describes a minimum bit rate allocation R_{min} for a video channel, a maximum bit rate allocation R_{max} for the video channel and a decoder buffer size D for the video channel. (Ozkan, 10:27-67.) Ozkan also describes multiple channels, with each channel having its own set of R_{min}, R_{max} and D. Even if, for the sake of argument, R_{min}, R_{max} and D were considered to be reference decoder parameters (and the Applicants believe they are not), using multiple sets of parameters for multiple channels, with each channel having one set of parameters (as in Ozkan), leads away from using multiple sets of parameters for "*a bit stream of encoded data for the given video clip*" (as in claim 117).

In Hurst, different encoders use different VBV models for different bitstreams. (Hurst, 4:17-29, 7:40-45.) Using different VBV models for different bitstreams, with each encoder having its own

VBV for one bit stream (as in Hurst), is different than, and leads away from, using multiple sets of parameters for "*a bit stream of encoded data for the given video clip*" (as in claim 117).

Eyuboglu describes transcoding a constant bit rate video bit stream to a variable bit rate video bit stream and packetizing the variable bit rate video bit stream into packets for transport over a packet-switched network. (Eyuboglu, Abstract.) Eyuboglu does not teach or suggest the above-cited language of claim 117.

Thus, taken separately, each of Ozkan, Hurst and Eyuboglu fails to teach or suggest the above-cited language of claim 117. The combination of Ozkan, Hurst and Eyuboglu fails to overcome this deficiency.

In addition, for at least the reason that the combination of Ozkan and Hurst is improper (see section III.B), the combination of Ozkan, Hurst and Eyuboglu is improper.

Claim 117 should be allowable. Each of dependent claims 118-120 depends directly or indirectly from, and includes the language of, claim 117, and should also be allowable. The Applicants will not belabor the merits of the separate patentability of these dependent claims.

V. Claims 78, 98, 111 and 123 Should Be Allowable.

In the final Office action, the Examiner rejects claims 78, 98, 111 and 123 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Hurst and Morris. The Applicants respectfully disagree.

Each of claims 78, 98, 111 and 123 depends directly or indirectly from, and includes the language of, independent claim 67, 92, 108 or 121. As explained above, Ozkan and Hurst do not teach or suggest the above-cited language of claims 67, 92, 108 and 121, respectively. Morris describes conversion of input data streams in MPEG-2 Transport Stream format into output data streams in MPEG-2 Program Stream format (Morris, Abstract), but also does not teach or suggest the above-cited language of claims 67, 92, 108 and 121, respectively. Thus, taken separately, each of Ozkan, Hurst and Morris fails to teach or suggest the above-cited language of claims 67, 92, 108 and 121, respectively. The combination of Ozkan, Hurst and Morris fails to overcome this deficiency.

In addition, for at least the reason that the combination of Ozkan and Hurst is improper (see section III.B), the combination of Ozkan, Hurst and Morris is improper.

For at least these reasons, claims 78, 98, 111 and 123 should be allowable. The Applicants will

not belabor the merits of the separate patentability of these dependent claims.

VI. Conclusion.

Claims 67-132 should be allowable. Such action is respectfully requested. The Examiner is invited to call the undersigned attorney at the telephone number below if the Examiner believes that doing so would further the prosecution of the present application.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 595-5300
Facsimile: (503) 595-5301

By 
Kyle B. Rinehart
Registration No. 47,027